

REMARKS

This reply is responsive to the Office Action mailed on February 28, 2006. Claims 1-19 are pending in the application. Reconsideration in light of the following remarks is requested.

I. Rejections under 35 U.S.C. § 112

Applicants acknowledge the Examiner's withdrawal of the rejections under 35 U.S.C. § 112.

II. Rejection under 35 U.S.C. § 102

Claims 1, 5-8, and 15-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Gurijala et al. (U.S. Patent No. 6,601,090, issued July 29, 2003) (Gurijala). Applicants respectfully disagree.

Gurijala discloses an object caching system serving an Intranet that includes a cache name server and a plurality of web cache servers. Each of the plurality of web cache servers couples to the Intranet and to the Internet and stores a respective plurality of Internet objects that have been previously retrieved from the Internet. The cache name server couples to the Intranet, receives a request for an Internet object from a web client coupled to the Intranet, and directs the web client to a serving web cache server of the plurality of web cache servers based upon the request. If the serving web cache server possesses a copy of the Internet object, it returns a copy of the Internet object to the web client. However, if the serving web cache server does not possess a copy of the Internet object, it retrieves a copy of the Internet object from the Internet and returns a copy of the Internet object to the web client. (See Gurijala, col. 2, lines 18-35)

The Examiner's attention is directed to the fact that Gurijala fails to disclose: "the content store is divided into a first section and a second section," as recited in independent claims 1 and 15. Specifically independent claims 1 and 15 recite:

1. A content exchange apparatus for caching content objects, the content exchange apparatus comprising:
 - a content store comprising a plurality of content objects, each content object originating from one of a plurality of origin servers and wherein the content exchange apparatus is configured to receive from at least one of the origin servers a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store, wherein the content store is divided into a first section and a second section;
 - a content tracker that determines the content objects stored in the content store and configured to receive identifiers from the plurality of origin servers;
 - an origin server database comprising a list of the origin servers identified to the content tracker by the respective origin server; and
 - a catalog of content objects stored in the content store. (emphasis added)
15. A method for caching content objects in a content exchange, the method comprising steps of:
 - storing content objects obtained from an origin server by the content exchange wherein the content exchange apparatus is configured to receive from the origin server a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store, wherein the content store is divided into a first section and a second section;
 - receiving information about the origin server from the origin server;
 - storing the information in a database;
 - determining a network address for the origin server using the database; and
 - contacting one of the origin server and another content exchange when a content object request results in a cache miss. (emphasis added)

The present invention discloses in one embodiment, a content exchange apparatus for caching content objects. Included in the content exchange apparatus are a content store, a content tracker, an origin server database, and a catalog of content objects. The content store includes a plurality of content objects. A determination is made by the content tracker determines as to which content objects are stored in the content store. The origin server database includes a list of origin servers associated with the content exchange. The catalog of content objects stored in the content store is maintained.

In one embodiment, data is flushed out of the cache quickly for content exchanges that are busy relative to the amount of storage in the cache. However, some embodiments have sticky content objects that remain pinned in the content exchange for a period of time regardless of use. (See Applicants' Published Specification, paragraph [0068])

In contrast, Gurijala fails to teach, disclose, or suggest that the content store is divided into a first section and a second section (as recited in claims 1 and 15). The Examiner points to Gurijala col. 6, lines 4-15 and 50-62 as evidence of the claimed elements. However, neither passage cited by the Examiner recites a content store divided into a first section and a second section or a second content exchange divided into a first section and a second section. Since the necessary elements are missing from the reference, the Examiner makes a general comment that "the content store may have any number of logically separations for maintaining data". (See Office Action, page 7)

A prima facie case of anticipation requires a showing of each claim element as set forth in the claim. Applicants respectfully submit that a prima facie case of anticipation has not been proven.

Therefore, Applicants submit that independent claims 1 and 15 are patentable over Gurijala. Claims 5-8 and 16-19 are patentable at least by virtue of depending from their respective base claim. Applicants respectfully request withdrawal of the rejection.

II. Rejection under 35 U.S.C. § 103

Claims 1, 5-8, and 15-20 stand rejected under 35 U.S.C. § 103(a) as being obvious over Gurijala in view of Chase (EP 0877326A2). Applicants respectfully disagree.

A. Claims 2-4

Claims 2-4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gurijala in view of Chase. Applicants respectfully disagree.

The Examiner concedes that Gurijala fails to disclose what is recited in each claim. In order to cure the Examiner's perceived deficiency of Gurijala, the Examiner cites Chase.

Chase discloses a network with shared caching. A central cache directory is maintained at a network server. Each time a station caches a data object received from a remote network, it informs the central cache directory. When a station comes online, it is asked to send a list of the contents of its cache. Whenever a station seeks an object from the remote network, the local network server first checks the central directory cache to see if the request can be satisfied at one of the local stations. Only if it cannot is the requested object retrieved from the remote network. (Chase, Abstract)

As argued above in Section II., Gurijala fails to teach, disclose, or suggest "the content store is divided into a first section and a second section", as recited in claims 1 and 15. Chase fails to cure the deficiencies of Gurijala as noted in Section II. As such, Applicants submit that claims 2-4 are patentable at least by virtue of depending from claim 1. Therefore, Applicants respectfully request withdrawal of the rejection.

B. Claims 9-14

Claims 9-14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gurijala in view of Chase. Applicants respectfully disagree.

Gurijala discloses an object caching system serving an Intranet that includes a cache name server and a plurality of web cache servers. Each of the plurality of web cache servers couples to the Intranet and to the Internet and stores a respective plurality of Internet objects that have been previously retrieved from the Internet. The cache name server couples to the Intranet, receives a request for an Internet object from a web client coupled to the Intranet, and directs the web client to a serving web cache server of the plurality of web cache servers based upon the request. If the serving web cache server possesses a copy of the Internet object, it returns a copy of the Internet object to the web client. However, if the serving web cache server does not possess a copy of the Internet object, it retrieves a copy of the Internet object from the Internet and returns a copy of the Internet object to the web client. (See Gurijala, col. 2, lines 18-35)

The Examiner's attention is directed to the fact that Gurijala fails to disclose: "the second content exchange is divided into a first section and a second section," as recited in claim 9. Specifically independent claim 9 recites:

9. A content storing system for caching content objects, the content storing system comprising:
 - a first content exchange;
 - a second content exchange, wherein the second content exchange is divided into a first section and a second section; and
 - a content bus coupled to the first and second content exchanges, wherein:
 - the first content exchange comprises an origin server database comprising a list of origin servers identified to the content exchange by the respective origin server,
 - the list of origin servers contains a plurality of origin servers that have no content objects stored in the first content exchange, and
 - the second content exchange comprises a content store comprising a plurality of content objects. each content object originating from one of the

plurality of origin servers and wherein the second content exchange is configured to receive from at least one of the origin servers a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store. (emphasis added)

The present invention discloses in one embodiment, a content exchange apparatus for caching content objects. Included in the content exchange apparatus are a content store, a content tracker, an origin server database, and a catalog of content objects. The content store includes a plurality of content objects. A determination is made by the content tracker determines as to which content objects are stored in the content store. The origin server database includes a list of origin servers associated with the content exchange. The catalog of content objects stored in the content store is maintained.

In one embodiment, data is flushed out of the cache quickly for content exchanges that are busy relative to the amount of storage in the cache. However, some embodiments have sticky content objects that remain pinned in the content exchange for a period of time regardless of use. (See Applicants' Published Specification, paragraph [0068])

In contrast, Gurijala and Chase fail to teach, disclose, or suggest that the second content exchange is divided into a first section and a second section (as recited in claim 9). The Examiner points to Gurijala col. 6, lines 4-15 and 50-62 as evidence of the claimed elements. However, neither passage cited by the Examiner recites a content store divided into a first section and a second section or a second content exchange divided into a first section and a second section. Since the necessary elements are missing from the reference, the Examiner makes a general comment that “the content

store may have any number of logically separations for maintaining data”. (See Office Action, page 12)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. Applicants respectfully submit that a prima facie case of obviousness has not been proven.

Therefore, Applicants submit that independent claim 9 is patentable over Gurijala in view of chase. Claims 10-14 are patentable at least by virtue of depending from their respective base claim. Applicants respectfully request withdrawal of the rejection.

Conclusion

Having fully responded to the Final Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicants hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

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